REMARKS/ARGUMENTS

In the Office Action of June 9, 2005 (the "Office Action"):

1. Claims 1-19 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-19 of U.S. Pat. No. 6,699,235;
2. Claims 1-7, 10-11, 20-22, 25-27 and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Pat. No. 5,740,699 issued to Ballantyne et al. ("Ballantyne et al.");
3. Claims 8 and 9 are rejected under 35 U.S.C. §103(a), as being unpatentable over Ballantyne et al. in view U.S. Pat. No. 6,425,177 issued to Akeel ("Akeel"); and
4. Claims 23, 24 and 28 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In the specification, paragraph [0001] has been amended to include the issued patent number previously left blank.

1. Rejection of Claims 1-19 under Nonstatutory Double Patenting Rejection:

Claims 1-6, 8-9, 12-15, and 17-19 have been amended, and as amended, are believed to be patentably distinct over claims 1-19 of U.S. Patent No. 6,699,235. Claims 7, 10-11 and 16 have been cancelled.

2. Rejection of Claims 1-7, 10-11, 20-22, 25-27 and 29 under 35 USC 102(b):

Claim 1 has been amended to recite "first and second components constrained to move in tandem and in opposite directions", and such a pair of first and second components is neither taught nor suggested by Ballantyne et al.

In Ballantyne et al., a wrist mechanism 10 utilizes three linear actuators 16a, 16b, and 16c to move and/or orient an end plate 14 having an end effector mounted on it. There is nothing in Ballantyne et al., however, to constrain any pair of its actuators to move in tandem and in opposite directions.

For example, it is stated in Ballantyne et al. that "if all three motors 22 of linear actuators 16a, 16b, 16c are activated so as to turn their respective ball screws 24 in a counter-clockwise direction, then the end plate is extended from its solid line position indicated in FIG. 1 toward extended position 14-1." Col. 2, lines 46-50.

Thus, from this example, it is clear that all three actuators 16a, 16b, 16c may move in the same direction, as taught in Ballantyne et al., and that no two of the actuators 16a, 16b, 16c are "constrained to move in tandem and in opposite directions" as recited in Claim 1.

Accordingly, Claim 1 is believed to be patentable under 35 USC 102(b) over Ballantyne et al. for the foregoing reasons.

Claims 2-6 are also believed to be patentable under 35 USC 102(b) over Ballantyne et al. since they depend from claim 1, and as such, are believed to be patentable for at least the same reasons as stated in reference to claim 1.

Claims 7 and 10-11 have been cancelled.

Claim 20 has been amended to claim a method "constraining first and second components to move in tandem and in opposite directions", and such constraining action is neither

taught nor suggested by Ballantyne et al. as previously explained in reference to claim 1 above.

Accordingly, Claim 20 is believed to be patentable under 35 USC 102(b) over Ballantyne et al. for essentially the same reasons as stated in reference to claim 1.

Claims 22 and 25-27 are also believed to be patentable under 35 USC 102(b) over Ballantyne et al. since they depend from claim 20, and as such, are believed to be patentable for at least the same reasons as stated in reference to claim 20.

Claims 21, 23-24 and 28-29 have been cancelled.

3. **Rejection of Claims 8 and 9 under 35 USC 103(a):**

Claims 8 and 9 are believed to be patentable under 35 USC 103(a) over Ballantyne et al. in light of Akeel since they depend from claim 1, and as such, are believed to be patentable for at least the same reasons stated in reference to claim 1.

In addition, Claim 8 has been amended to recite "third and fourth components constrained to move in tandem and in opposite directions", and such a pair of constrained components is neither taught nor suggested by Ballantyne et al., as previously explained, nor by Akeel, as explained below.

In Akeel, each of its linear actuators 34, 35, 39, 40, 41, and 42 has its own motor 37, gear box 36 and screw drive 38. See FIGS. 5 and 7, and corresponding descriptions on Col. 8, line 13 to Col. 9, line 7 and Col. 10, line 8 to Col. 11, line 44. There is nothing in Akeel

to teach or suggest that any two of its linear actuators are "constrained to move in tandem and in opposite directions."

For example, it is stated in Akeel that "each of the actuators can be extended by different amount to achieve the desired final position for the point 47." Thus, in this example, all actuators are extended, albeit by different amounts. None of the actuators are retracted while others are extended so that they would be moving in opposite directions.

Also, Claim 9 has been amended to recite "intersections of the first, second, third, and fourth components through a plane orthogonal to the axial line define four corners of a square," and such an arrangement is neither taught nor suggested by Ballantyne et al. or Akeel, alone or in combination with each other.

In Ballantyne et al., three linear actuators 16a, 16b, 16c and an extendable means 32 are shown. As is evident from its figures, the intersections of these four components through a plane orthogonal to the axial line C, however, do not define four corners of a square. They appear to define three corners of a triangle (16a, 16b, 16c) with a point in the center of the triangle (32).

In Akeel, six linear actuators 34, 35, 39, 40, 41, and 42 are shown. As is evident from its figures, however, the intersections of any four of these components through a plane orthogonal to the axial line Z do not define four corners of a square.

Conclusion

Claims 1-6, 8-9, 12-15, 17-20, 22, and 25-27 are pending in the application. Claims 7, 10-11, 16, 21, 23-24, and 28-29 have been cancelled. Reconsideration of the rejected claims is respectfully requested, and an early notice of their allowability earnestly solicited.

Respectfully submitted,

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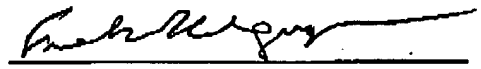

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